

PROACTIVE OPTICAL WIND SHEAR PROTECTION AND RIDE QUALITY IMPROVEMENT SYSTEM

ABSTRACT OF THE DISCLOSURE

Embodiments of the present invention automatically compensate control of an aircraft
5 for an environmental condition, such as turbulence or wind shear. A sensor is configured to
sense speed of air relative to an aircraft at a predetermined distance in front of the aircraft. A
processor is coupled to receive the sensed speed of air from the sensor. The processor
includes a first component configured to determine whether the speed of the air at the
predetermined distance is indicative of an environmental condition, such as turbulence or
10 wind shear. A second component is configured to automatically generate control signals for
controlling the aircraft such that the environmental condition is automatically compensated
by a time the aircraft enters the environmental condition.

